



Chapter 13

Paradox 4.5 for Windows

Paradox 4.5 for Windows is a powerful *relational database management* program that allows you to arrange and store related data, or information, into tables. With Paradox, you can create, sort, and view your tables. Additionally, the program provides tools for producing forms and reports of the data.

Accessing Paradox

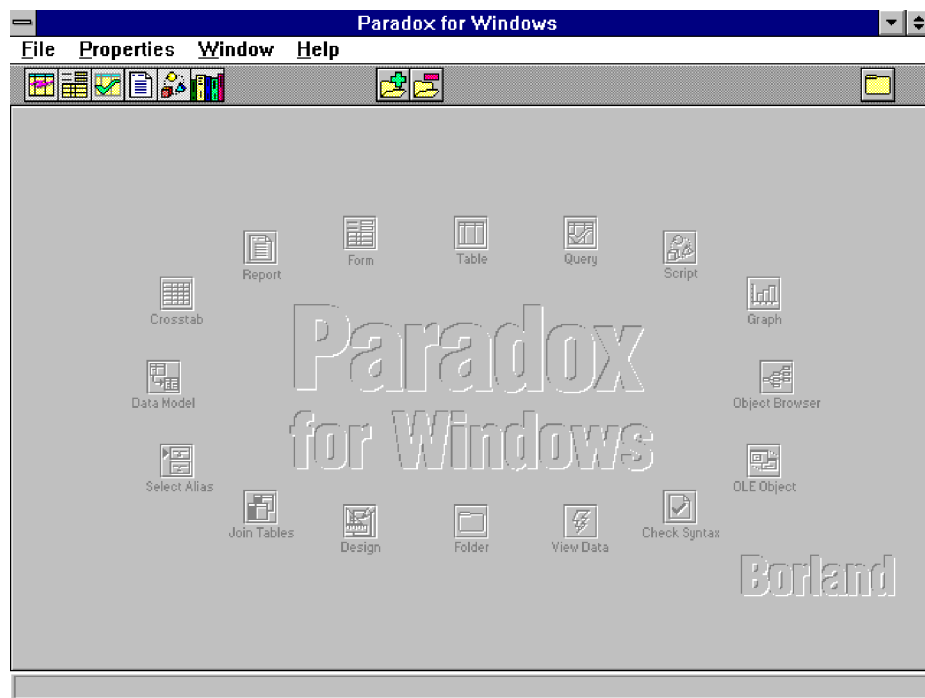
To access Paradox from Program Manager:

1. Double-click on the Paradox for Windows group icon.
2. Double-click on the Paradox for Windows program-item icon.



Paradox opens the Desktop window.

Paradox Desktop
window



Exploring the Desktop

The Paradox *Desktop* is the primary window where you do your work. All other windows (called *child windows*) are opened on the Desktop. As the active window changes, the menus and SpeedBar on the Desktop also changes. The section provides a brief description of each part of the Desktop at startup.

The Title Bar







The *title bar* is located along the top of the Paradox window and displays the application name.

The Menu Bar

The *menu bar* is located just below the title bar and displays the menu names. The menus contain the commands used in Paradox.

The SpeedBar

The *SpeedBar* is located directly below the menu bar and contains buttons that speed up your tasks. A brief description of each button on the Desktop SpeedBar is given below:

Button	Action
	Opens the Table window. Use this window to enter and view data in a table.
	Opens the Form window. Use this window to design and run forms.
	Opens the Reports window. Use this window to design and reports.
	Opens the Query window. Use this window to design and run queries.
	Opens the Script window. Use this window to edit and run <i>ObjectPAL</i> code, the Paradox application language.
	Opens the Libraries window. Use the this window to build

libraries of frequently used ObjectPAL routines.



Opens the Folder window. Use this window to view and access the contents of the working directory.



Adds a graphical representation of a Paradox object, called an *object icon*, to the Folder window.



Removes an object icon from the Folder window.

The Status Bar

The *status bar* runs along the bottom of the Desktop and displays the SpeedBar help and status.

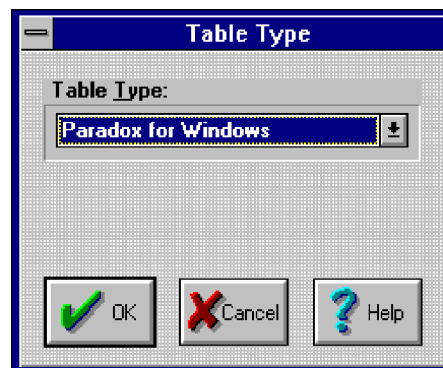
Creating a Table

A *table* is used to arrange data. A table consists of *rows* and *columns*. Each row contains all available information about a particular item, called a *record*. Each column contains one category of the data that makes up a record, called a *field*.

To create a new table from the Desktop:

1. Choose New from the File menu, and then choose Table.

Table Type dialog
box



2. Click on the OK button.

Create Table dialog
box

Defining Fields

To define columns, or fields, from the Create Table dialog box:

1. Type the name of the first field (up to 25 characters) in the Field Name column of the Field Roster.
2. Press TAB or ENTER to move to the Type column.
3. Click on the Type column with the right mouse button, or press SPACEBAR to display the list of *field types* (types of data that the field can contain).
4. Select a field type from the list, or type a field type symbol:

	Field type	Symbol	Description
special ASCII	Alphanumeric	A	Contains letters, numbers, characters, and printable characters.
10 ³⁰⁸ .	Number	N	Contains numbers from -10 ³⁰⁷ to
	Currency	\$	Contains numbers from -10 ³⁰⁷ to 10 ³⁰⁸ . Currency fields are formatted to display the currency symbol and decimal places.

	Date	D	Contains a date from January 1, 100 to December 31, 9999.
	Short number	S	Contains numbers from -32,767 through 32,767 with no decimal values.
	Memo	M	Contains text strings that are too long to store in an alphanumeric field.
their	Formatted Memo	D	Formatted memo fields are similar to Memo fields, except you can format text.
cannot	Binary	B	Contains data that Paradox interpret.
	Graphic	G	Contains pictures or graphics.
	OLE	O	Contains objects from other Windows applications.

5. Move to the Size column, and type a field size, if one is required.
6. Press the down arrow to move to the next line.
7. Repeat the steps above until all fields have been defined.

Inserting a Field

To insert a field between two existing fields:

1. Select the field that will appear below the new row.
2. Press INS on the keyboard to insert an entire row.

Deleting a Field

To delete a field from the Field Roster:

1. Select the field that you want to delete.
2. Press CTRL+DEL to delete an entire row.

Defining Keys

A *primary key* is a field or group of fields containing data that uniquely identifies each record of a table. Keys are used to order records and prevent duplicate records in the table. Remember the following rules when defining keys:

- C A table can have only one key.
- C A key can consists of more than one field.
- C A key must be the first field in the Field Roster.

To define a key:

1. Move to the Key column in the Field Roster, and double-click on it.
The key field indicator (*) appears in the column.

Specifying Validity Checks

Validity checks help protect data integrity by placing conditions or limitations on the values that you can enter in a field. The types of validity checks available in Paradox are described below:

Validity check	Meaning
Required Field	Every record in the table must have a value in this field.
Minimum	The values entered in this field must be equal to or greater than the minimum you specify here.
Maximum	The values entered in this field must be less than or equal to the maximum you specify here.
Default	The value you specify here is automatically entered in the field, but can be replaced with another value.
Picture	The character string that you specify here acts as a template for the values that are entered in this field.

To place a validity check on a field:

1. Select a field from the Field Roster.

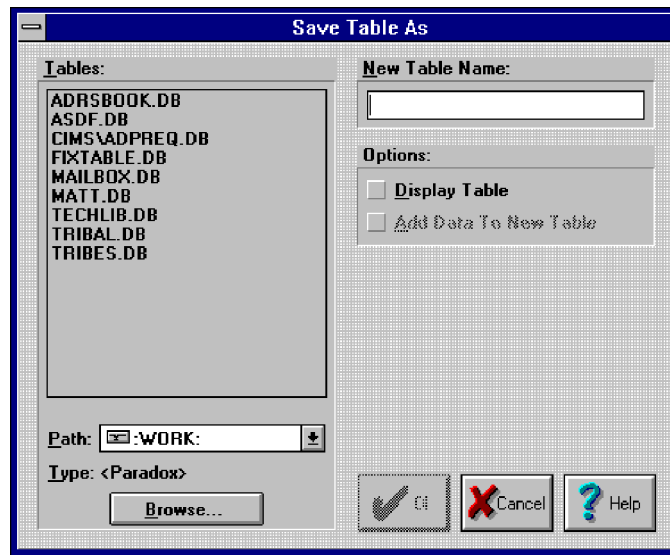
2. Select Validity Checks from the Table Properties drop-down list box.
3. Type values in the appropriate text boxes.

Saving a New Table

To save a new table from the Create Table dialog box:

1. Click on the Save As button.

Save Table As dialog
box



2. If necessary, select the drive and directory where you want to save the table.
3. Type a new name in the New Table Name text box.
4. Click on the OK button.

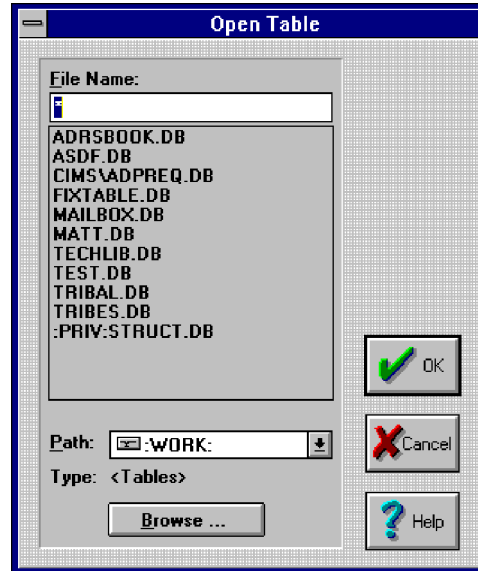
Opening a Table

To open an existing table from the Desktop:



1. Click on the Open Table SpeedBar button. Or choose Open from the File menu, and then choose Table.

Open Table dialog
box



2. If necessary, select the path where the table is located.
3. Double-click on the file that you want to open. Or select the file, and click on the OK button.

The selected table appears in the Table window.

Table window

Table : ADRSBOOK.DB			
1	Worrel, Steve W	6/27/72	777-3993
2	Brose, Laura M	2/11/75	742-1827
3	Cummings, Jeannie M	3/12/73	991-9901
4	Stratton, William K	3/3/84	255-2265
5	Synge, Ian M	5/30/72	463-3345

Entering or Editing Data









To enter or edit data in the Table window:



1. Click on the Edit Data SpeedBar button, or choose Edit Data from the Table menu.
2. If necessary, press TAB, ENTER, or the arrow keys to move to the field whose data you want to enter or edit.

You can also click on the Locate and navigation buttons on the

SpeedBar to move to a particular field, value, or record:

Button	Action
	Locates a particular value in a field.
	Moves to a particular value in a field.
	Moves to the first record in the table.
	Moves to the previous record set in the table.
	Moves to the previous record in the table.
	Moves to the next record in the table.
	Moves to the next record set in the table.
	Moves to the last record in the table.

3. Begin typing data in the field.
4. Repeat steps 2 and 3 until all data has been entered or edited.
5. Click on the Edit Data SpeedBar button, or choose End Edit from the Table menu to leave the Edit mode.



Although you have to use the Save or Save As command to save a newly created object, Paradox automatically saves the changes to a table's data.

Restructuring a Table

Paradox allows you to change the *structure*, or arrangement of fields in a table, after it has been created. For instance, you may want to rename a field or change the data type.

To change the field definitions from a Table window:

1. Choose Restructure from the Table menu.

Restructure Table dialog box

	Field Name	Type	Size	Key
1	Name	A	30	
2	Title	A	15	
3	Agency/Tribe	A	50	
4	Address	A	40	
5	City	A	25	
6	State	A	15	
7	Zip Code	A	9	
8	Phone Number	N		
9	Fax Number	N		
10	Date	D		
11	Memo	M	50	

Enter a field name up to 25 characters long.

☐ Pack Table

Save Save As... Cancel Help

2. Make the appropriate changes to the table's structure.



The Restructure Warning dialog box will appear if you make changes that could result in the loss of data.

3. Click on the Save button to save changes to the structure without renaming the table.

Printing a Table

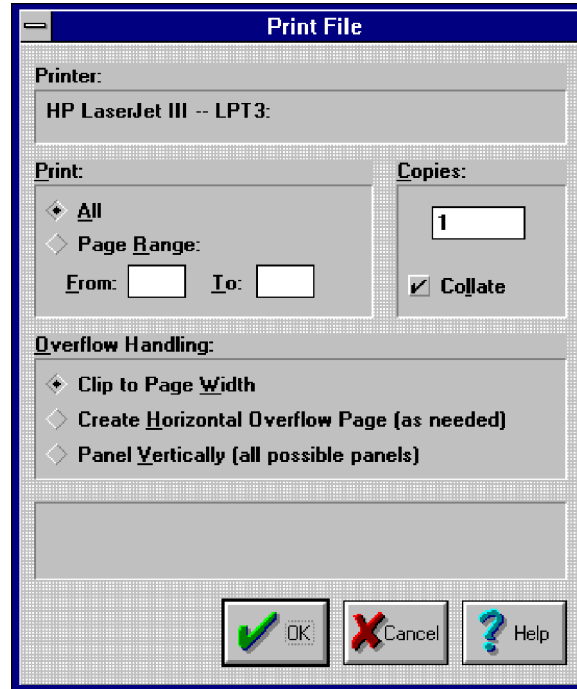
When you print a table, Paradox creates a default report in a tabular format, using the table's name as the page header. Page numbers and the current data are also displayed in the printout.

To print a table:



1. From the Table window, click on the Print SpeedBar button, or choose Print from the File menu.

Print File dialog box



2. Under Print, click on an option:

Option	Action
All	Prints the entire table.
Page Ranges	Prints the specified range. If this option is selected, type the starting and ending pages to

3. Specify the number of copies to print.
4. Under Overflow Handling, click on an option:

Button	Action
Clip to Page Width	Trims all data that does not fit across the page.
Create Horizontal Overflow Page	Prints additional pages to fit all the data.

the	Panel Vertically	Prints a second page for each page of report, regardless of how many pages actually have data that overflow.
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5. Click on the OK button.

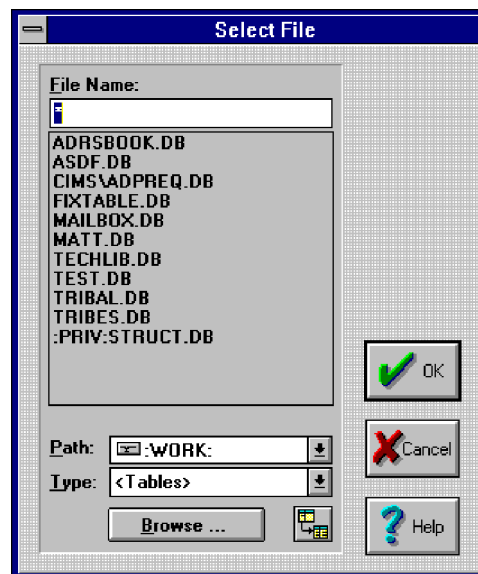
Creating a Query

A *query* is a question you ask Paradox about information in your tables. For instance, a query can be used to select certain records or fields in a table.

To create a simple query:

1. Choose New from the File menu, and then choose Query.

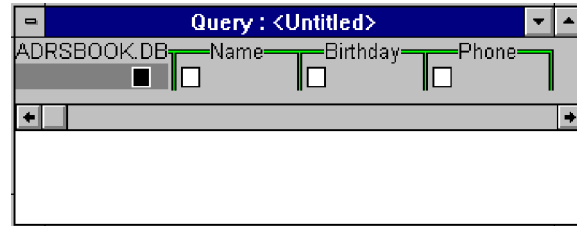
Select File dialog
box







2. If necessary, select the path where the table(s) is located.
3. Select one or more tables (click single files, CTRL+click non-sequential files, and SHIFT+click sequential files) to query.
4. Click on the OK button.

Paradox opens a Query window containing a query image of the selected table(s).

Query window



5. To display a field in the answer, click and hold its check box.
The check menu appears.
6. Select a check type:

Check type	Action
 field	Checkmark Includes only unique values for the checked in the answer.
	Check plus Displays all values in a field, including duplicates.
	Check descending Displays the values of the fields sorted in descending order.
	GroupBy check Groups by a field, but does not display its value in the answer.



7. Click on the Run Query SpeedBar button, or choose Run from the Query menu.

The answer to the query is shown in the Answer table.

Answer table

ANSWER	Name	Phone
1	Worrel, Steve W	777-3993
2	Synge, Ian M	463-3345
3	Stratton, William K	255-2265
4	Cummings, Jeannie M	991-9901
5	Brose, Laura M	742-1827

Saving a Query

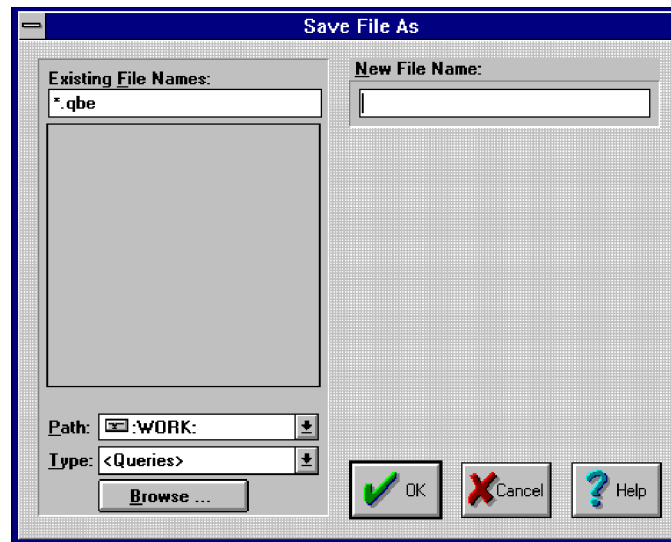
It is a good idea to save your queries, especially if you need to run them frequently.

To save a query for later use:

1. Choose Save or Save As from the File menu.

If you have not saved the query before, the Save File As dialog box will appear.

Save File As dialog
box



2. If necessary, select the path where you want to save the query.
3. Type a new name in the New File Name text box.
4. Click on the OK button.

Creating a Form

A *form* contains controls that allow you to enter, modify, and view records in a database. Although Paradox provides a default form layout, you may choose to design your own forms.

To create a default form from a Table window:



1. Click on the Quick Form SpeedBar button, or choose Quick Form from the Table menu.

The currently selected record in the Table will appear as the first record on the Form window.

Form window



note

Working with a Form window is very similar to working with a Table window. Refer to the sections above to learn how to enter and edit data and print a form. Forms created with the default layout cannot be saved.

Creating a Report

A *report* presents your data on the screen or on a printed page. Reports are useful for displaying subtotals and grand totals across a set of related data. Paradox provides a default report layout, however, you may choose to design and customize your reports.

To create a default report from the Table window:



1. Click on the Quick Report SpeedBar button, or choose Quick Report from the Table menu.

Default Report

Report : New		
Wednesday, September 13, 1995		ADRSBOOK
Name	Birthday	Phone
Worrel, Steve W	6/27/72	777-3993
Brose, Laura M	2/11/75	742-1827
Cummings, Jeannie M	3/12/73	991-9901
Stratton, William K	3/3/84	255-2265
Synge, Ian M	5/30/72	463-3345



Working with a Report window is very similar to working with a Table window. Refer to the sections above to learn how to enter and edit data and print a report. Reports created with the default layout cannot be saved.

Using the On-line Help

The on-line Help provides step-by-step instructions and reference information on Paradox commands, dialog boxes, and tasks.

There are several ways to access Help:

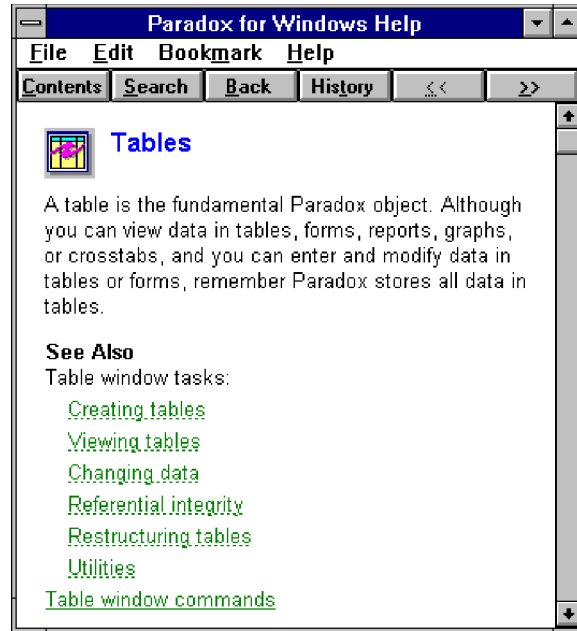
1. Choose a command from the Help menu:

Command	Description
Contents	Displays a list of all Help topics available in Paradox.
SpeedBar	Provides help on Paradox's toolbars.
Keyboard	Gives keyboard equivalents to mouse actions.
Using Help	Provides instructions on how to use Paradox's on-line Help.
Support Info	Provides product support information.
About	Displays information about Paradox, such as copyright and version.

-OR-

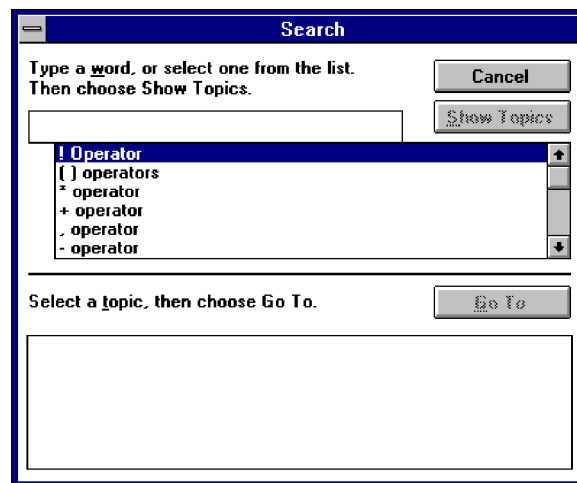
1. Press F1 to get help with the task that you are currently working on.

Paradox for
Windows Help
window

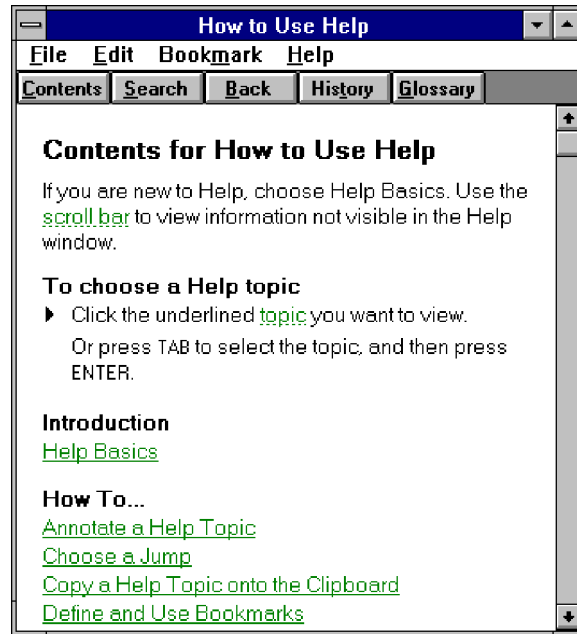


2. From the Paradox for Windows Help window, click on the Contents or Search button, click on a topic, or press F1 to learn how to use Help.

Search dialog box



How to Use Help window



-OR-

1. Click on the Help button in most dialog boxes to access specific information about the items in the dialog boxes.

Exiting Paradox

To exit Paradox after a session:

1. Click on the Desktop's Control-menu box, or choose Exit from the File menu.

Additional References

For more information on how to use Paradox 4.5 for Windows, obtain the following reference material from your ADP Coordinator:

- C Borland's *Paradox 1.0 for Windows User's Guide* is an easy-to-read reference guide that provides illustrations and instructions.
- C *Paradox 4.5* training videos by Keystone Learning Systems teaches you basic, intermediate, and advanced Paradox topics.